Stopping Damage Caused by Moisture Penetration From the Ground

with MOISTOP...

a Permanent Vapor Barrier

AMERICAN SISALKRAFT COMPANY

Division of St. Regis Paper Company
ATTLEBORO, MASS. - CARY, ILLINOIS - TRACY, CALIFORNIA

Much has been written about the real problem of moisture damage to home (as well as non-residential) construction. Private and governmental authorities all testify to the serious menace present due to the migration or passage of moisture from the ground upward into the structure.

It has been further proved that even though the "water table" may be many feet below the surface of the ground, the daily discharge of moisture reaches astonishing and alarming proportions. It has been estimated, for example, that under average conditions about 15 gallons of water per day is evaporated in the crawl space area of a typical five-room house. This approximate figure refers to soil conditions having an average, not a high moisture content.

Evaporated water is vapor and is a colorless, odorless gas. This is the insidious enemy which is causing great damage to structures today by collecting as moisture (vapor is condensed as it hits a colder surface) within the structure.

The effects of this moisture eventually manifest themselves as peeling paint, wall stains and general deterioration of wooden members in floors, walls and ceilings.

It is also now apparent that water-vapor from everyday activities such as breathing, cooking, laundering, bathing, etc. within a house, even though it, too, is a source of damage, is minor compared to the volume of moisture released from the ground.

There is a great deal of scientifically secured data already published which support these facts. We will not duplicate them all here, but refer you for confirmation to the periodicals listed below.*

These facts definitely establish that serious damage *will occur* within the cavity space and wall areas of today's buildings if proper attention is not paid to controlling moisture-vapor.

Properly designed *ventilation* provides partial control of moisture, but the *only* positive way to stop moisture migration is by the proper use of a *vapor barrier*.

A vapor barrier is a membrane or sheet which is adequately impervious to moisture. It must be strong and durable to resist ripping or puncturing, which would impair its efficiency.

A unique vapor barrier, called Moistop, has been manufactured by the American Sisalkraft Company. Its purpose is to stop moisture under all floors and it has been designed with economy and performance in mind.

Moistop can be used in most types of construction; slab on ground structures, dwellings with basements, and homes with crawl spaces. In each instance, the vapor barrier can be used effectively to control moisture and prevent damage.

About the Product

Moistop is a combination of rot-resistant, reinforced, waterproof paper and polyethylene film. There are superior characteristics of both of these materials, which, when combined, provide a vapor barrier product unsurpassed in performance coupled with economy.

Polyethylene is "inert". It is not affected by acids and alkalies. It is, for all practical purposes, permanent. However, used "unsupported" or alone it is subject to puncturing and tearing. It is also difficult to handle. The tough paper backing, however, has "body" and resists abrasion and tearing. Moistop can be quickly unrolled and lays in place without difficulty. Used together, polyethylene and reinforced paper provide the ultimate in a tough, lasting vapor barrier — at a cost of less than 4ϕ per square foot.

Moistop meets FHA and VA minimum property standards. It is available through building material suppliers everywhere. Standard roll sizes are: 72" and 96"—containing 1000 square feet. This product is also made in *concealed flashing* size rolls of 120 lineal feet in a variety of widths from 6" to 60".

*Sources

Moisture Condensation, Circular F6.2, Small Homes Council — Univ. of Illinois

Moisture Problems in Crawl Space Homes—G.A. Voorhees, National Warm Air Heating & Air Conditioning Assoc.

Prevention of Dampness in Basements, Housing & Home Finance Agency

Moisture Migration from the Ground, Housing Research paper 28, Housing & Home Finance Agency

Crawl Spaces, Housing & Home Finance Agency



Concrete slab structures. To prevent the upward passage of moisture through concrete floors, Moistop should be placed over the leveled and tamped base. Laps of no less than 6" should be used.



Homes with basements. With today's mode of living, the home owner is no longer satisfied to accept the old concept of a damp and musty basement as a necessary evil. Dry floors are particularly vital if recreational rooms are planned. Moistop should be applied to the excavated surface just prior to the pouring of the concrete floor. The widest practicable width should be used with laps of not less than 6".



Foundation walls can be economically waterproofed with Moistop. The product should be applied to the outside of the foundation wall with any suitable adhesive or mastic to hold it to the wall until the wall is backfilled.



Homes with crawl spaces. Existing homes as well as new can very effectively take advantage of protection against moisture from the ground. After debris and sharp objects are removed from the area, Moistop should be unrolled over the entire area, lapping about 4".

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Product Description

A layer of 2 mil black polyethylene is extruded onto a sheet of high quality kraft. This, in turn, is laminated to a sheet of kraft which is treated to resist fungus and mold. Crossed reinforcing fibers are completely imbedded in the asphalt laminant for high resistance to puncturing and tearing during fabrication and application.

Product Function

A permanent vapor barrier for use under concrete slabs, in crawl spaces and for concealed flashing. Stops the migration of moisture-vapor, protects flooring against dry rot, warping and cupping.

Physical Properties

Puncture Resistance (Beach units)	53
Burst Strength (Mullen Test)	90 lbs. per sq.inch
Tensile Strength, lbs. per sq.inch (dry)	
MD	70
CMD	48
Tensile Strength, lbs. per sq.inch (wet)	
24 hours soaking	
MD	30
CMD	20
Water Resistance - hours	
(Flat dry indicator method)	48 hours plus
Moisture Vapor Permeance	
(ASTM E-96-53T Procedure "A")	0.12 perms
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Compliance with Specifications

Moistop meets the following specifications:

VA and FHA Minimum Property Standards as vapor barrier under concrete slabs, as ground cover in crawl spaces and for concealed flashing and spandrel beam waterproofing.

Suggested Specifications and Applications

UNDER SLABS AND UNDER BASEMENT FLOORS - Base for concrete shall be level and tamped. MOISTOP as manufactured by the American Sisalkraft Company shall be applied in the widest practicable width. All joints shall be lapped no less than 6 inches. (If sealing of laps is desired, see Footnote*).

IN CRAWL SPACES - earth shall be leveled, removing all sharp objects and wood scraps. MOISTOP as manufactured by the American Sisalkraft Company shall be applied over the ground in the widest practicable width. All joints shall be lapped no less than 2 inches.

(continued)

CONCEALED FLASHING - MOISTOP as manufactured by the American Sisalkraft Company may be used for concealed flashing: over heads and under sills of openings in frame, masonry, and masonry-veneer walls, through wall flashing, in parapet walls and under copings, cavity wall flashing, masonry-veneer base flashing and for spandrel beam water-proofing.

Miscellaneous

Standard roll sizes: 72" and 96" widths. All rolls 1,000 sq.ft. Rolls for flashing 12" and 60" wide. All rolls 120 feet long. Other sizes available on special order.

Weight: 7-1/2# per 100 sq.ft.

Availability: Nationally at Lumber and Building Material Dealers. Contractor Cost: Approximately 3¢ per sq.ft.

See our catalog in Sweet's Architectural or Light Construction File.

NOTE: Testing results given above are averages, not guaranteed minimums.

* Recommended adhesives for bonding MOISTOP to itself.

ADHESIVE MANUFACTURER Everbond Cold Stik E. L. Bruce Company 1700 Thomas Street Memphis 1, Tennessee Paisley 7245 Paisley Products, Inc. 632 West 51st Street New York, N.Y. Bond Master Z377 Rubber & Asbestos Corp. 225 Bellview Avenue Bloomfield, N.J. 3 M Acetate Fibre Minnesota Mining & Mfg. Co. 990 Fauquier Avenue St. Paul 6, Minnesota

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MOISTOF

A Permanent Vapor Barrier

FOR CONCEALED FLASHING AND FOR WATER-PROOFING CRAWL SPACES AND UNDER ALL CONCRETE FLOORS, ON OR BELOW GRADE.

MEETS FHA AND VA MINIMUM PROPERTY REQUIREMENTS

Moistop Is Polyethylene Laminated To Rot-Resistant Sisalkraft

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